

Appl. No. 09/706,937
Amdt. dated March 20, 2003
Reply to Office action of December 20, 2002

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

SUB B17
Claim 1 (currently amended): An improved index for data that represent geographic features, wherein said index has a structure that includes two spatial dimensions whereby said data indexed by said structure are searchable spatially using said two spatial dimensions, the improvement comprising:

an additional dimension included in said structure of said index, whereby a non-spatial property of the geographic features represented by the data is searchable using said additional dimension.

Claim 2 (currently amended): An improved index for data that represent geographic features, wherein said index has a structure that includes two spatial dimensions whereby said data indexed by said structure are searchable spatially using said two spatial dimensions, the improvement comprising:

AI
an additional dimension included in said structure of said index, whereby a non-spatial property of the data that represent the geographic features is searchable using said additional dimension.

Claim 3 (original): The invention of Claim 1 or 2 wherein said structure is a *k*-d-tree index structure comprising a root node, intermediate nodes and leaf nodes, wherein each node is part of a parent-child relationship wherein each parent node includes control information from which one of at least two child nodes associated with the parent node are distinguishable based on a search key.

Claim 4 (original): The invention of Claim 1 or 2 wherein said improved index is homogeneous.

Claim 5 (original): The invention of Claim 1 or 2 wherein said improved index is non-homogeneous.

Appl. No. 09/706,937
Amdt. dated March 20, 2003
Reply to Office action of December 20, 2002

Claim 6 (original): The invention of Claim 1 or 2 wherein said geographic features are roads.

Claim 7 (currently amended): The invention of Claim 1 wherein said non-spatial property is a rank of the geographic features represented by the indexed data.

Claim 8 (original): The invention of Claim 7 wherein said rank includes both integers and fractional values.

Claim 9 (currently amended): The invention of Claim 2 wherein said non-spatial property is a granularity of the indexed data.

A1
Claim 10 (currently amended): The invention of Claim 2 wherein said non-spatial property is a viewing altitude associated with the indexed data.

Claim 11 (currently amended): The invention of Claim 2 wherein said non-spatial property is a scale associated with the indexed data.

Claim 12 (currently amended): The invention of Claim 2 wherein said non-spatial property is an expiration date associated with the indexed data.

Claim 13 (currently amended): The invention of Claim 2 wherein said non-spatial property is a creation date associated with the indexed data.

SUB B27
A2
Claim 14 (new): An improved index for data, wherein said index has a structure that includes two dimensions whereby said data indexed by said structure are searchable using said two dimensions, the improvement comprising:

an additional dimension included in said structure of said index, whereby a granularity of the indexed data is searchable using said additional dimension.